

patterns; we meet them often in the so-called Persian textures and flat ornaments (Fig. 16).

We now come to the third group of forms—the so-called Cashmere pattern, or Indian palmetta. The developed forms which, when they have attained their highest development, often show us outlines that are merely fanciful, and represent quite a bouquet of flowers leaning over to one side, and springing from a vessel (the whole corresponding to the Roman form with the vessel), must be thrown to one side, while we follow up the simpler forms, because in this case also we have no information as to either the where or the when the forms originated. (Figs. 17, 18, 19.)

Here again we are struck by resemblances to the forms that were the subjects of our previous study, we even come across direct transitional forms, which differ from the others only by the lateral curve of the apex of the leaf; sometimes it is the central part, the spadix, that is bent outwards, and the very details show a striking agreement with the structure of the Aroid inflorescence, so much so that one might regard them as actually copied from them.

This form of ornament has been introduced into Europe since the French expedition to Egypt, owing to the importation of genuine Cashmere shawls. (When it cropped up in isolated forms, as in Venice in the fifteenth century, it appears not to have exerted any influence; its introduction is perhaps rather to be attributed to calico-printing.) Soon afterwards the European shawl-manufacture, which is still in a flourishing state, was introduced. Falcot informs us that designs of a celebrated French artist, Couder, for shawl-patterns, a subject that he studied in India itself, were exported back to that country and used there (Fig. 20).

In these shawl-patterns the original simple form meets us in a highly developed, magnificent, and splendidly coloured differentiation and elaboration. This we can have no scruples in ranking along with the mediæval plane-patterns, which we have referred to above, among the highest achievements of decorative art.

It is evident that it, at any rate in this high stage of development, resisted fusion with Western forms of art. It is all the more incumbent upon us to investigate the laws of its existence, in order to make it less alien to us, or perhaps to assimilate it to ourselves by attaining to an understanding of those laws. A great step has been made when criticism has, by a more painstaking study, put itself into a position to characterise as worthless, ignorantly imitated, or even original, miscreations such as are eternally cropping up. If we look at our modern manufactures immediately after studying patterns which enchant us with their classical repose, or after it such others as captivate the eye by their beautiful colouring, or the elaborate working out of their details, we recognise that the beautifully-balanced form is often cut up, choked over with others, or mangled (the flower springing upside down from the leaves), the whole being traversed at random by spirals, which are utterly foreign to the spirit of such a style, and all this at the caprice of uncultured boorish designers. Once we see that the original of the form was a plant, we shall ever in the developed artistic form cling, in a general way at least, to the laws of its organisation, and we shall at any rate be in a position to avoid violent incongruities.

I had resort, a few years ago, to the young botanist Ruhmer, assistant at the Botanical Museum at Schöneberg, who has unfortunately since died of some chest-disease, in order to get some sort of a groundwork for direct investigations. I asked him to look up the literature of the subject, with respect to the employment of the Indian Araceæ for domestic uses or in medicine. A detailed work on the subject was produced, and establishes that, quite irrespective of species of *Alocasia* and *Colocasia* that have been referred to, a large number of Araceæ were

employed for all sorts of domestic purposes. *Scindapsus*, which was used as a medicine, has actually retained a Sanscrit name, "vustiva." I cannot here go further into the details of this investigation, but must remark that even the incomplete and imperfect drawings of these plants, which, owing to the difficulty of preserving them, are so difficult to collect through travellers, exhibit such a wealth of shape, that it is quite natural that Indian and Persian flower-loving artists should be quite taken with them and employ them enthusiastically in decorative art. Let me also mention that Haeckel, in his "Letters of an Indian Traveller," very often bears witness to the effect of the Araceæ upon the general appearance of the vegetation, both in the full and enormous development of species of *Caladia* and in the species of *Pothos* which form such impenetrable mazes of interlooping stems.

In conclusion, allow me to remark that the results of my investigation, of which but a succinct account has been given here, negative certain derivations, which have been believed in, though they have never been proved; such as that of the form I have last discussed from the Assyrian palmetta, or from a cypress bent down by the wind. To say the least the laws of formation here laid down have a more intimate connection with the forms, as they have come down to us, and give us a better handle for future use and development. The object of the investigation was, in general words, to prepare for an explanation of the questions raised, and even if the results had turned out other than they have, it would have sufficed me to have given an impulse to labours which will testify to the truth of the dead master's words:—

"Was Du ererbt von deinen Vätern hast,
Erwirb es, um es zu besitzen."

NOTES

THE death is announced, at the age of seventy-four years, of Prof. Lepsius, the celebrated Egyptologist.

THE conference and jury work at the Health Exhibition is now in full swing, and we are glad to note that, with regard to the Conference, all the societies and organisations that have to deal with subjects akin to health or education are taking up the matter very warmly, so that the executive of the Exhibition has the advice and opinion of many experts. The recent opening of the Educational Section by the Prince of Wales, to which we have already referred, has recently drawn more attention to the *mens sana, the corpus sanum* having up to the present moment been alone regarded. From the first we consider that the matter of education has been placed altogether in far too secondary a position, and if a little more trouble had been taken by those who are responsible for the Exhibition, the educational exhibits might have been as extensive and as important as those regarding health. That is the more to be regretted because so much is being said about education nowadays, especially technical education, by those who know very often very little of what is really wanted, and of what true technical education really means. The members of the various juries are working with a will, and from what we learn we do not think it probable that the objections made to some of the awards last year will be renewed this. The opportunity which has been afforded to the exhibitors of practically nominating a considerable number of jurymen is a measure well adapted to allow the thing to work smoothly. One of the great difficulties encountered by the jurymen has been the hurried way in which the Exhibition itself has been put together and catalogued. We have for too great an extent a succession of shops containing various articles, instead of a complete separation of the various articles among their several classes. This of course gives great trouble to all concerned, and is an administrative blunder which should not be allowed to be repeated.

WE are glad to be able to announce that H.R.H. the Prince of Wales has become Patron of the Marine Biological Association, and has contributed a handsome donation to its funds. The following is now the full list of Officers and Council as definitely elected by the Association, at its meeting on June 17:—Patron, H.R.H. the Prince of Wales, K.G. President, Prof. Huxley (President of the Royal Society). Vice-Presidents: The Duke of Argyll, K.G., the Duke of Sutherland, K.G., the Marquis of Hamilton, the Earl of Dalhousie, K.T., Lord Walsingham (Trustee of the British Museum of Natural History), Edward Birkbeck, M.P. (Chairman of the Executive Committee of the International Fisheries Exhibition), George Busk, F.R.S., W. B. Carpenter, C.B., M.D., F.R.S., W. H. Flower (Director of the British Museum of Natural History), J. Gwyn Jeffreys, F.R.S., Sir John Lubbock, Bart., M.P. (President of the Linnean Society). Council: Prof. Moseley, F.R.S. (Oxford), Chairman, Prof. Jeffrey Bell, F.Z.S. (British Museum), W. S. Caine, M.P., W. T. Thiselton Dyer, C.M.G. F.R.S. (Royal Gardens, Kew), John Evans, D.C.L. (Treasurer Royal Society), A. C. L. G. Günther, F.R.S. (British Museum), Prof. Herdman (Liverpool), E. W. H. Holdsworth, Prof. McIntosh (St. Andrew's), Prof. Milnes Marshall (Manchester), Sir Philip Cunliffe Owen, K.C.M.G., C.B., G. J. Romanes, F.R.S. (Sec. Linn. Soc.), P. L. Sclater, F.R.S. (Sec. Zool. Soc.), Adam Sedgwick (Cambridge). Hon. Treasurer, Frank Crisp, (V.P. and Treas. Linn. Soc.), 6, Old Jewry, E.C. Hon. Secretary, Prof. E. Ray Lankester, F.R.S., 11, Wellington Mansions, North Bank, N.W.

WE regret to learn of the death of the venerable Abbé Moigno at the age of eighty-one years. The name of the Abbé has been long known in connection with French science, and more especially as the founder, and till quite recently the editor, of *Les Mondes*.

It is proposed to hold a special American Exhibition in London in May 1886, at which the products, manufactures, and varied phases of life in the United States will be represented.

By a decree dated Ems, July 4, the Emperor conveys his thanks to Dr. Auwers, the celebrated astronomer who so successfully superintended the German preparations for observing the transits of Venus in 1874 and 1882. The Emperor further expresses his thanks for the assistance so hospitably rendered to the German scientific expeditions, not only by Germans living abroad, but also by many persons belonging to other nationalities.

BIOLOGISTS attending the Montreal meeting of the British Association will be pleased to hear that Prof. Asa Gray has promised to be present and to read a paper in Section D "On some characteristic features of the Botany of North America," with the special view of aiding botanists and members of the Section generally in their appreciation of the flora.

It is announced from Montreal that a large number of the members of the British Association visiting Canada next month have already been "placed" in private houses in the city. The matter continues to be very heartily taken up in the towns of the Dominion, and there is every probability of a warm welcome being extended to the members. Considerable amusement has been caused in Montreal by some of the letters received by the Montreal Committee of the British Association from those members on this side of the Atlantic desiring information regarding Canada. The climate of the country is evidently a subject upon which there is much misconception among members. The queries on this point are most exacting, while a quite unwarranted dread of mosquitoes is held by not a few members. It is satisfactory to learn that a circular is now in course of preparation that will answer most of the queries received by letter, and that on the completion of the labours of the Private Hospitality Committee a directory of the visitors will be published.

PROF. R. S. BALL has accepted an invitation from the Lowell Institute, Boston, United States, to give a course of six lectures on "Chapters in Modern Astronomy" next October.

THE Society of Chemical Industry held their annual meeting in Newcastle last week. Dr. Perkin, F.R.S., was elected President for the next year.

UNDER the auspices of the Royal Geographical Society, Mr. E. C. Rye has done a most useful service to students by compiling a New Guinea Bibliography. It will be appended to Mr. C. R. Markham's paper on New Guinea, to be issued in No. 2, vol. i. of the Society's Supplementary Papers. Mr. Rye's Bibliography covers over fifty pages, and contains considerably over a thousand entries. It is evidently the result of immense labour and research, and is practically exhaustive. It includes not merely geography proper, but every aspect of the country; the references to natural history are specially copious, and include not only books but papers and notes in periodical publications of all kinds. The references are of the most precise character, and the whole is worthy of the editor of the *Zoological Record*.

IT may interest many of our readers—especially those who would like to add to the pleasure of a tour by a little photography—to know that the London Stereoscopic Company give gratuitous private lessons to amateurs who purchase their apparatus from the Company. We have no doubt this will solve a prime difficulty in the case of many who are ambitious to be able to photograph on their own account, but who do not know how to take the first step.

NOTWITHSTANDING the troubles that have surrounded Madagascar for the last year or two, the scientific activity of the missionaries of the London Missionary Society has not abated, and the native printing press has not been idle. We have just received from Antananarivo two numbers of the *Antananarivo Annual and Madagascar Magazine*, edited by the Rev. R. Baron, containing numerous papers of varied scientific interest. The following are those of most importance:—The Sakalava (No. 2), by the Rev. A. Walin; Notes on four species of Lemur and on the Aye-Aye, by Mr. G. A. Shaw; Customs connected with death and burial in Malagasy, by the Rev. S. E. Jorgensen; Resemblance between Malagasy words and customs and those of Western Polynesia, by the Rev. R. S. Codrington. In No. 7 for 1883 we have—The race elements of the Malagasy, by the Rev. L. Dahle; the Sakalava (No. 3), by the Rev. A. Walin; Volcanoes in Eastern Imerina, by the Editor; Malagasy "Fady" (Tabu), by Mr. H. E. Standing; Genera of Malagasy plants, by the Editor; Relics of sign and gesture language among the Malagasy, by the Rev. J. Sibree; and various natural history and meteorological notes.

DR. REGEL, the Russian traveller, who recently arrived in Merv, intends proceeding along the northern mountain slopes of Afghanistan and the Amu Daria to Pamir. This journey will conclude the doctor's explorations in Central Asia.

THE Milan Society for the Commercial Exploration of Africa has organised a circumnavigation of Africa, with a view of affording the pupils of the High School of Commerce, and others, an opportunity of becoming acquainted with likely markets for Italian products. The steamer will leave Genoa on September 1, and the whole voyage will occupy four months. A professor is to lecture during the voyage on the commercial geography of Africa.

THE first mail from Kadiak Island received this season, *Science* states, has arrived at San Francisco, bringing dates to May 2. According to the correspondent of the *Bulletin*, the account of the eruption of the volcano on Augustine Island, Cook's Inlet, sent by the last advices of 1883, was much exaggerated. The island "was not split in two, and no new island was formed

but the west side of the summit has fallen in, forming a new crater, while the whole island has risen to such an extent as to fill up the only bay or boat harbour, and to extend the reefs, or sea-otter rocks, running out from the island in various directions." The hunting-party feared to be lost has arrived safely in Kadiak. No tidal waves were observed on the west shore of Cook's Inlet or on Kadiak Island. The winter had been very mild, the mercury not having fallen below 10° F.; and spring began in March, wild flowers being in bloom in the latter part of April.

THE educational statistics of Japan for the past year show that the number of common schools throughout the country is 29,081, being an increase of 339 as compared with the preceding year, while the number of scholars is 3,004,137, an increase of 396,960, and the number of teachers is 84,765, being an increase of 8147.

THE Swedish Government have granted a sum of 850*l.* for the establishment of five additional so-called "chemical" stations, in order to benefit the agriculturist with scientific advice as to the crops, their diseases, &c.

THE sixth Davis Lecture of the Zoological Society of London was given in the Lecture-Room in their Gardens in Regent's Park, on Thursday, the 10th inst., by Mr. Henry Seebohm. The subject was that of "Birds' Nests," and consisted of an account of the breeding of birds on the Fern Islands off the coast of Northumberland, on the Derbyshire Moors, and in the valley of the Lower Danube. The lecturer pointed out that, so far as regards the means which birds take for the protection of their eggs, they may be classified in five groups—(1) those which rely upon the concealed position of the nest, such as the kingfishers, bee-eaters, pigeons, &c.; (2) those which rely upon the inaccessible position of the nest, such as guillemots, herons, &c.; (3) those which rely upon the protective colour of the eggs, such as sandpipers, terns, &c.; (4) those which rely upon the protective colour of the sitting hen, such as the blackbird, game birds, &c.; (5) those which rely upon their own ability, either singly, in pairs, or in colonies, to defend their eggs, such as cormorants, birds of prey, &c. Mr. Seebohm laid great stress upon the much greater interest to be found in the study of the life and habits of birds than in the investigation of the form and colour of their feathers or the peculiarities of their anatomy.

UNDER the auspices of the East India Association, a meeting of naturalists, planters, sportsmen, and others interested in the affairs of India, was held on Friday, July 11, at the rooms of the Zoological Society, under the presidency of Prof. Flower, LL.D., F.R.S. (Director of the British Museum Natural History Department, and President of the Zoological Society), for the purpose of urging the necessity of Government measures for the preservation of wild birds in India. The principal address was delivered by Mr. Robt. H. Elliot, sometime planter of Mysore, and a well-known writer upon Indian topics. He pointed out that every civilised Government with the exception of that of India has recognised the value of birds as insect-eaters, and has adopted measures for their preservation; and that the absence of legislation forebodes, where it has not yet presented, serious results to planters and agriculturists. As the most convenient season for the destruction of birds is during the fine weather that succeeds the heavy rains of the monsoons, and as this season is also the breeding time, the destruction of insect-eating birds proceeds at such a rate as must soon lead to almost absolute extermination unless preservative measures are speedily adopted. There was a general agreement at the meeting that legislation on the subject is imperatively required; and it was resolved that a representation to that effect should be addressed to the Government of India.

MR. J. H. ANGAS, who has already founded an engineering scholarship of the annual value of 200*l.* in the Adelaide Uni-

versity, has signified his intention of endowing a Chair of Chemistry. For this purpose Mr. Angas is prepared to give the sum of 6000*l.*, and to pay an annual sum of 350*l.* until he pays over the capital sum. A letter to this effect from Mr. J. H. Angas was recently read by the Chancellor at a special meeting of the Council. The Council resolved to accept the gift, and authorised the Chancellor to write and thank Mr. Angas for his continued munificence to the University.

PROF. MILNE of Tokio, Japan, writes to us:—"A short time ago I described a pair of conical pendulum seismographs. Each seismograph consisted of a heavy mass suspended by a string, &c. A local paper describing this innocently gave to the world an account of a pair of 'comical pendulums.' Each 'comical' pendulum consisted of a heavy 'man' suspended at the end of a string, &c. These errors, which were repeated throughout the article, did so much to popularise the instrument that their correction was neglected."

A RECENT number of *L'Exploration* contains an article by the Chancellor of the French Consulate at Hanoi, M. Aumoite, which possesses special interest at the present time. It is the record of a journey from Hanoi through Bacninh to Langson on the Chinese frontier, thus following the same route as the French troops have done in their recent operations in Tonquin. From Hanoi to the meeting of the provinces of Bacninh and Langson, the country is described as populous and fertile, but on entering the latter district it becomes mountainous, with bad roads, and almost depopulated by the brigand hordes which have infested this borderland. Almost everywhere the water is bad, and fever rife even amongst the natives. Nowhere is this the case more than at Bacle, where the French forces are now hurrying up to retrieve the recent reverse at Langson. The country around Langson is described as healthy, it is rich in rice and cotton, but the trade here, as all along the valley of the Red River, is in the hands of the Chinese. When the French occupy this region, and when the recent treaty is carried out, we may expect a vast addition to our scanty knowledge of the geography of this little visited region.

FROM a paper contributed by the veteran scholar, Dr. Edkins, to a recent number of the *Chinese Recorder*, it appears that about B.C. 2200 the Chinese possessed a knowledge of the art of writing, a year of 366 days with an intercalary month, the astrolabe, the zodiac, the cycle of sixty, of twelve musical reeds forming a gamut, which also constituted the basis of a denary metrology for measures of length, weight, and capacity, divination, and a feudal system. In B.C. 1130 they were acquainted with the clepsydra and with the gamut of five musical notes. "Human knowledge was systematised in a scheme of numerical categories in which the five elements played a special part." About B.C. 550 the silk trade sprang into existence, the stars were classified, foreign names of unknown origin were introduced for the purpose of applying the cycle of sixty-two years. About B.C. 140 Chinese travellers visited Afghanistan, India, Bactria, &c. The cycle of Calippus was introduced into Chinese astronomy, and geographical knowledge concerning western nations was acquired. In the first two centuries of our era trade became more extended by sea; paper-making and the manufacture of ink were introduced from Europe, the Babylonian cosmogony became the main element of the Taoist cosmogony, and the gamut of five was increased to seven notes.

THE last volume (ii.) of the *Revue d'Ethnographie* contains, among others, articles by M. Bertrand on the Troglodytes, the introduction of metals into the West, and the great routes of migration and commerce in the earliest historical period; by M. Charnay, on the ruins in Yucatan; by M. Deniker, on the Giliaks; by Dr. Martin, on the cranial malformation of the

Chinese; by M. Ujfalvy, on the Aryans north and south of the Hindoo Koosh; and by Baron Vaux, on the Kanakas of New Caledonia.

THE additions to the Zoological Society's Gardens during the past week include two Quebec Marmots (*Arctomys monax* ♂ ♀) from North America, presented by Mr. N. Stainfield; a Prairie Wolf (*Canis latrans* ♂) from North America, presented by Mr. R. Payze; three Suricates (*Suricata tetradactyla*) from South Africa, presented by Mr. W. R. Dobbin; two Red-beaked Weaver Birds (*Quelea sanguinrostris* ♂ ♀) from West Africa, presented by Mrs. Nettleship; two Swift Parrakeets (*Lathamus discolor* ♂ ♀) from Tasmania, presented by Mr. J. Abrahams; four Common Vipers (*Vipera berus*), British, presented by Mr. Walter E. Blaker; two Smooth Snakes (*Coronella levis*), British, presented by the Rev. Charles Harris; two Red Kangaroos (*Macropus rufus* ♂ ♀), a Greater Sulphur-crested Cockatoo (*Cacatua galerita*) from Australia, deposited; four Beautiful Finches (*Estrela bella* ♂ ♀ ♀) from Australia, a Lanner Falcon (*Falco lanarius*), captured at sea, purchased; a Hybrid Luddorf's Deer (between *Cervus luddorfi* ♂ and *C. canadensis* ♀), a Hybrid Mesopotamian Deer (between *Dama mesopotamica* ♂ and *D. vulgaris* ♀), a Red Deer (*Cervus elaphus* ♀), four Australian Wild Ducks (*Anas interciliosa*), a Mandarin Duck (*Aix galericulata*), bred in the Gardens.

ZOOLOGICAL NOMENCLATURE¹

II.

DR. COUES said that he was much gratified at the interest shown in the subject of zoological nomenclature, and indorsed the words of the Chairman that names were of the greatest possible consequence. Nomenclature was a necessary evil, and the point was always to employ that method of naming objects which should most clearly reflect not only the characters of the objects themselves, but our ideas respecting those characters and the view we take of them. As to what constitutes a species, there had been an absolute revolution in the definition of a species since the time of Linnæus, the opinion having been long held that every species was a distinct and individual creation. But that idea had passed out of existence in the minds of most natural historians of the present day, who accepted a general theory of the evolution of species by a gradual modification. That being the case, it was idle to inquire "What is a species?" no such thing existing any more than a genus; and so intimately related were all forms of animal and vegetable life that, if they were all before us, no naming would be possible, for each would be found to be connected completely with another; therefore the possibility of naming any species was, as it were, the gauge and test of our ignorance. Having thus touched very briefly upon the subject of missing links, which alone enable us to name objects which still exist, Dr. Coues proceeded to inquire, "What of so-called species the connecting links between which are still before our eyes?" In illustration of this he would cite some instances of connecting links which exist between certain forms. He then referred to the case of one of the best-known Woodpeckers in North America (*Picus villosus*), and discussed its climatal and geographical variation. He was of opinion that all these geographical races were indistinctly separable forms, and he would indicate them by trinomial names, proceeding upon the definite principle of geographical variation according to conditions of environment, meaning by this all the external influences which modify the plastic organism. Moisture, the humidity of the atmosphere, appeared to have the greatest effect, particularly in regard to colour. Latitude, with its varying degrees of heat, determined size more than any other influence. As a matter of fact this condition of things was found to occur, and the question was, How should we recognise it in our language? Specification had ceased to be of use, and the question was whether the system in favour in America was sufficient or insufficient to meet the case. On these points he would be glad to hear opinions; and in concluding he would read a paragraph from the new edition of the "Key to North American Birds," giving formally the rule for the employment of trinomials as now

in use by American ornithologists and many other zoologists of the United States. This rule is as follows:—

"No infallible rule can be laid down for determining what shall be held to be a species, what a con-species, sub-species, or variety. It is a matter of tact and experience, like the appreciation of the value of any other group in zoology. There is, however, a convention upon the subject, which the present workers in ornithology in this country (America) find available—at any rate, we have no better rule to go by. We treat as 'specific' any form, however little different from the next, that we do not know or believe to intergrade with that next one;—between which and the next one no intermediate equivocal specimens are forthcoming, and none, consequently, are supposed to exist. This is to imply that the differentiation is accomplished, the links are lost, and the characters actually become 'specific.' We treat as varietal of each other any forms, however different in their extreme manifestation, which we know to intergrade, having the intermediate specimens before us, or which we believe with any good reason do intergrade. If the links still exist, the differentiation is still incomplete, and the characters are not specific, but only varietal, in the literal sense of these terms. In the latter case, the oldest name is retained as the specific one, and to it is appended the varietal designation."¹

Dr. Günther, F.R.S., said that during the whole of this discussion it appeared to him that this new movement was in fact a reaction. It had always appeared to him that ornithologists went too far in attaching to the slightest modification of colour the rank of a species; and when he looked over the list of species of a genus well known to him, he found there a number of different forms distinguished for very different reasons, and could not help being struck by the great diversity of value which was attached to the distinctive characters of these various forms. There was nothing to show that there was any system in distinguishing and naming the species of birds. He looked with favour on the method proposed by Dr. Coues and his compatriots. It was a system he had himself employed occasionally in his systematic writings since 1866, and Dr. Coues would find that in some cases he had adopted it pure and simple. He (Dr. Günther) had been disappointed in looking over the new edition of Dr. Coues' "Key to North American Birds," for he found there that Dr. Coues adopted trinomials in some cases and binomials in others. He maintained that logically one ought to adopt the trinomial nomenclature for all other forms, and keep the binomial only for that category in which these varieties may be contained. If Dr. Coues and those who were with him adopted that system, he for one would gladly employ it in all those cases in which the geographical range of certain forms is clearly ascertained.

Dr. Sclater, F.R.S., would remind Dr. Coues that this mode of designating the forms of animal life was by no means a new one, as might be seen on reference to Schlegel's "Revue Critique," published in 1844. He thought the only difficulty lay in the extent to which it was likely to be carried out. Dr. Coues, in his preface to the new "Key to the Birds of America" had hinted at this difficulty. If too much stress were laid upon the value of trinomialism we should open the flood-gates to an avalanche of new names by naturalists who have not taken enough trouble to investigate the matter under consideration. The time had now come when it would be advisable to a certain extent to use trinomials. He could not at all agree with Dr. Coues when he said that no such thing as species exists, for forms were known which had all the characters of well-marked species. It was only in cases where faunæ had been fully worked out that trinomial names would come into use, and for such forms he was quite prepared to adopt the system.

Mr. Blanford, F.R.S., said that he would add one word to the discussion, as nobody else had taken up the one or two points which might be advanced in opposition to the proposed system. He thought the movement an unfortunate one, for the reason that it would certainly have the effect of rendering nomenclature in general less certain than it was before. An equation containing three variables was much more complicated than one in which there were only two, and when one had three names any one of which was liable to be changed to suit personal views the fixture of nomenclature would be even further off than it is now. Then the case of ornithology was not nearly, in point of fact, so complicated as some other classes, as, for instance, in the Mollusca. Trinomial nomenclature had been proposed to,

¹ A more formal and elaborate presentation of Dr. Coues' views may be found in the *Zoologist* for July, 1884, p. 247, being the verbatim report of the address delivered before the National Academy of Sciences at Washington U.S.A., in April last.—ED.

¹ Continued from p. 259.